

California Electronic Greenhouse Gas Reporting Tool


Reporting for Subpart W

Petroleum and Natural Gas Systems

March 13, 2012

Presentation Slides Available Here:
<http://www.arb.ca.gov/cc/reporting/ghg-rep/ghg-rep.htm>

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DISCLAIMER

This training is provided by ARB solely for informational purposes. It does not provide legal advice and does not have legally binding effect. This training does not supplant, replace or amend any of the legal requirements in the Regulation for the Mandatory Reporting of Greenhouse Gas Emissions, title 17, California Code of Regulations, sections 95100-95157. Conversely, any omission or truncation of regulatory requirements found within this training does not relieve any entity or person of their legal obligations to fully comply with all requirements of the regulation.


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Training Resources

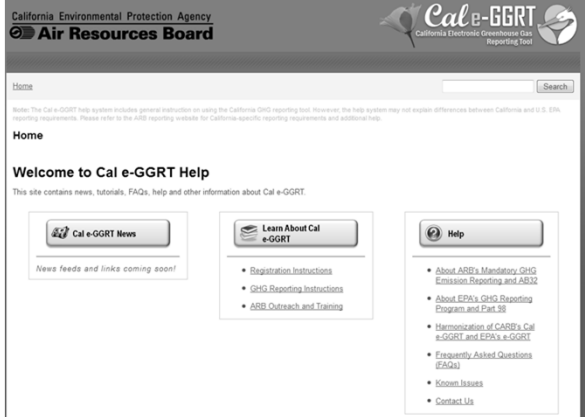
- Reporting Guidance: Applicability, Metering
<http://www.arb.ca.gov/cc/reporting/ghg-rep/guidance/guidance.htm>
- Tool Training: Registration, Subparts
<http://www.arb.ca.gov/cc/reporting/ghg-rep/tool/ghg-tool.htm>
- Cal e-GGRT Main Help Page
<http://www.ccdsupport.com/confluence/display/calhelp/Home>
- U.S. EPA Detailed Sector Training Slides
<http://www.epa.gov/climatechange/emissions/training.html>
 (use as a supplement to ARB summary slides)

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Cal e-GGRT Help

<http://www.ccdsupport.com/confluence/display/calhelp/Home>



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Subpart W - Outline

- Define your Subpart W reporting entity (a.k.a. facility)
- Identify the emission source types you are required to quantify and report.
- Register your facility in Cal e-GGRT
- Calculate emissions using the Cal e-GGRT functionality or off-line.
- Report emissions using Cal e-GGRT.

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Identifying your Subpart W Industry Segment(s)

- EPA §98.230(a) defines 8 industry segments
 - Offshore petroleum and natural gas systems
 - Onshore petroleum and natural gas production
 - Onshore natural gas processing
 - Onshore natural gas transmission compression
 - Underground natural gas storage
 - Liquefied natural gas (LNG) storage
 - LNG import and export
 - Natural gas distribution

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Define your reporting footprint

- Subpart W uses three “facility footprint” definitions
 - Onshore Petroleum and Natural Gas Production
 - Natural Gas Distribution
 - Remaining 6 Subpart W Industry segments

http://www.arb.ca.gov/cc/reporting/ghg-rep/guidance/ghg_oilgasfacility_definition.pdf

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Subpart W Industry Segments (\$98.238 Definitions)

- *Onshore Petroleum and Natural Gas Production* - Facility reporting footprint is defined as the basin
 - EPA basin definition follows California county lines, however several counties may be in one basin.
- *Natural Gas Distribution* – Facility defined as all pipelines, metering and regulating stations.
- *Other Subpart W facilities* - use the standard CARB facility definition 95102(144) – “contiguous or adjacent property”

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Identify the emission sources you are required to report

- Refer to both ARB Mandatory Reporting Regulation and US EPA Reporting Rules

– EPA Final Rule: November 30, 2010 40 CFR Part 98, Mandatory Reporting of Petroleum and Natural Gas Systems (FR Vol. 75, No. 229, pg. 74458).

– EPA Final Rule: December 29, 2009 (FR Vol. 74, No. 209, pg.56260)

<http://www.epa.gov/climatechange/emissions/notices.html>

– ARB Final Regulation, title 17, California Code of Regulations, section 95100-95157, effective January, 1, 2012

http://www.arb.ca.gov/cc/reporting/ghg-rep/regulation/2010_regulation.htm

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Subpart W GHG Reporting Matrix

Subpart W GHG Reporting Matrix

Emission Source Type	EPA/ARB citation (emissions calculation methodology)	Individual Sources (where applicable)	Industry segment(s) required to report
Natural gas pneumatic device venting	98 233(a) 95153(a)&(b)		2,4,5
Natural gas driven pneumatic pump venting	98 233(c) 95153(a)&(b)		2
Acid gas removal vents	98 233(d) 95153(c)		2,3
Dehydrator vents	98 233(e) 95153(d)		2,3
Well venting for liquids unloading	98 233(f) 95153(e)		2
Gas well venting during completions and workovers from hydraulic fracturing	98 233(g) 95153(f)		2
Gas well venting during completions and workovers without hydraulic fracturing	98 233(h) 95153(f)		2
Blowdown vent stacks	98 233(i) 95153(h)		3,4,7
Onshore production storage tanks	98 233(j) 95153(i)		2
Transmission storage tanks	98 233(k) 95153(g)		4
Well testing venting and flaring	98 233(l) 95153(j)		2

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Subpart W GHG Reporting Matrix

Associated gas venting and flaring	98 233(m) 95153(k)		2
Flare stacks	98 233(n) 95153(l)		2,3
Centrifugal compressor venting	98 233(o) 95153(m)		2,3,4,5,6,7
Reciprocating compressor venting	98 233(p) 95153(n)		2,3,4,5,6,7
Leak detection and repair emission factors	98 233(q) 95153(o)	98 232(g)(7) (a)(7) (f)(6) (g)(3) (h)(4) (i)(1)	3 4 6 7 8
Population count and emission factors	98 233(r) 95153(p)	98 232(c)(2)(1) (f)(6) (g)(3) (h)(4) (i)(2) (j)(3) (k)(4) (l)(5)	2 6 7 8 8 8 8
EOR injection pump blowdown	98 233(s) 95153(u)		4
EOR hydrocarbon liquids dissolved CO ₂	98 233(v) 95153(v)		2
Produced water dissolved CH ₄ and CO ₂	98 233(w) 95153(v)		2

^aEPA Citation refers to the November 30, 2010, 40 CFR Part 98 Mandatory Reporting of Greenhouse Gases; Petroleum and Natural Gas Systems, Final Rule (FR Vol. 75, No. 229, pg. 74458).

^bARB Citation refers to the Final Regulation Order which became effective January 1, 2012.

Industry segment key

- Onshore Petroleum and Natural Gas Production (report emissions by submitting BOEMRE generated emissions report.)
- Onshore Petroleum and Natural Gas Production
- Natural Gas Processing Plants
- Natural Gas Transmission Compression
- Natural Gas Underground Storage
- LNG Storage
- LNG Import and Export
- Natural Gas Distribution

http://www.arb.ca.gov/cc/reporting/ghg-rep/guidance/ghg_subpart_w_matrix.pdf

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Subpart W and BMM

(Best Available Monitoring methods)

- Current ARB MRR incorporates the EPA April 25, 2011 Final Rule concerning the use of BMM. This rule allows the use of BMM for 1st 9 months of 2011.
- EPA Final Rule has extended the use of BMM for the full 12 months of 2011 (Rule from September 27, 2011). This rule is not incorporated in the present ARB MRR.
- ARB issued a Regulatory Advisory that extends the use of BMM for the full year 2011.
- BMM can only be applied to certain data elements. Check the US EPA Final Rules for specifics.

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What is Cal e-GGRT Used For?

- Cal e-GGRT is the system used to report all data required by the GHG mandatory reporting regulation.
- The tool contains modules for each sector required to report.
 - Also includes modules for Fee Regulation and SF₆
- Multiple users can be associated with a single facility or entity.
- Verifiers can be associated with facilities and entities in the tool for data review purposes.

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Overview of Cal e-GGRT Operation

- Registration – old and new reporters.
- Input required facility information.
- Adding subparts for reporting.
- Entering emissions data.
- Data reporting mechanisms.
 - Direct interface, XML spreadsheet uploads, spreadsheet attachments (varies by sector).
- Validation messages.

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Registration

- Need a ARB Registration Code to register in Cal e-GGRT
 - New reporters must request an ARB Registration Code prior to registration. Send an e-mail request to: ghgreport@arb.ca.gov

March 1: Registration and System Overview

A brief overview of registering in the new Cal e-GGRT system and overall system operation.

Slides: [1-per-page \(color\)](#) [4-per-page \(B&W\)](#)
[Detailed Registration Instructions](#)

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Cal e-GGRT Tabs

Facility Management Tab

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HOME FACILITY MANAGEMENT DATA REPORTING

MY FACILITIES FACILITY SUMMARY

Cal e-GGRT Help
 About Facility Management

ARB Test Facility - TEST ONLY - Production Site
 Facility Summary

Cal e-GGRT FACILITY SUMMARY
 From this summary page, depending upon your role, you can make changes to the "Facility Profile" information, the facility's representatives Designated Representative (DR) and Alternate Designated Representative (ADR), and to your Agents if you are a DR or ADR.

Facility Representatives	
Designated Representative	Patrick Gaffney
Alternate Designated Representative	Karen Lutter

Facility Profile

Physical Address	ARB Test Facility - TEST ONLY - Production Site 10011 Street Sacramento CA 95814
Mailing Address	ARB Test Facility - TEST ONLY - Production Site 10011 Street Sacramento CA 95814

Certificate of Representation Signed and Complete: No further action is required by the facility representatives.

Certificate of Representation

Agent (for this facility)	for
Byard W Mosher	DR
Amey Huang (Pending)	DR

Remove self as Agent

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Cal e-GGRT Tabs

Data Reporting Tab

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Your Facility Data Report

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Your Facility Data Report

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Reporting: Adding Subparts

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Reporting: Adding Subparts

☐ 95114 (Subpart P)—Hydrogen Production
Description (SHOW | HIDE)

☐ 95120 (Subpart Q)—Iron and Steel Production
Description (SHOW | HIDE)

☐ 95117 (Subpart S)—Lime Manufacturing
Description (SHOW | HIDE)

☐ 95118 (Subpart V)—Nitric Acid Production
Description (SHOW | HIDE)

☒ 95150-95157 (Subpart W)—Oil and Natural Gas Systems
Description (SHOW | HIDE)

☒ 95113 (Subpart Y)—Petroleum Refineries
Description (SHOW | HIDE)

☐ 95119 (Subpart AA)—Pulp and Paper Manufacturing
Description (SHOW | HIDE)

and Natural Gas Liquids
Description (SHOW | HIDE)

☐ 95123 (Subpart PP)—Suppliers of Carbon Dioxide
Description (SHOW | HIDE)

AB 32 COST OF IMPLEMENTATION FEE REGULATION

☐ 95201-95207—AB 32 Cost of Implementation Fee Regulation
Description (SHOW | HIDE)

SF6 GAS INSULATED SWITCHGEAR

☐ 95350-95359—SF6 Gas Insulated Switchgear
Description (SHOW | HIDE)

ELECTRIC POWER ENTITIES

95111—Electric Power Entities
Not currently available for selection
Description (SHOW | HIDE)

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Reporting Emissions – Subpart W

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HOME FACILITY MANAGEMENT DATA REPORTING

Cal e-GGRT Help

ARB Test Facility - TEST ONLY - Production Site (2011)
Sections 95150-95157 (Subpart W): Oil and Natural Gas Systems
Subpart W Overview

OVERVIEW OF SUBPART W REPORTING REQUIREMENTS
Reporters are required to upload an XML file containing their facility's emissions data. To generate the XML file, download the **Petroleum and Natural Gas Systems Emissions Reporting Tool** spreadsheet below, complete the spreadsheet, export the completed spreadsheet to XML, and upload exported XML under section #2 below.

Reporters are also required to upload an Excel (xls) file containing their activity data. Download the **Petroleum and Natural Gas Systems Activity Data** spreadsheet below and upload the completed spreadsheet under section #3 below. Be sure to upload the Excel (xls) file. You do not need to generate XML from this spreadsheet.

The **Supplemental Petroleum and Natural Gas Systems Calculation Tool** is also available to download below. This spreadsheet can be used to help reporters calculate emissions values. YOU DO NOT NEED TO UPLOAD THIS SPREADSHEET.

1) DOWNLOAD APPLICABLE FORM(S)

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Reporting Emissions – Subpart W (to download a form click any of the three Subpart W forms)

1) DOWNLOAD APPLICABLE FORM(S)

- Petroleum and Natural Gas Systems Emissions Reporting Tools (XML upload required)
- Petroleum and Natural Gas Systems Activity Data (upload required)
- Supplemental Petroleum and Natural Gas Systems Calculation Tool (optional - do not upload)

2) UPLOAD XML FROM THE PETROLEUM AND NATURAL GAS SYSTEMS EMISSIONS REPORTING TOOL

Upload the XML exported from your completed Petroleum and Natural Gas Systems Emissions Reporting Tool here.

NOTE: Upload XML files only. The spreadsheet includes directions for how to export XML from the spreadsheet.

Uploaded File Name	Attached By	Date	Delete
No files found.			

3) UPLOAD PETROLEUM AND NATURAL GAS SYSTEMS ACTIVITY REPORTING TOOL

Upload the completed Petroleum and Natural Gas Systems Activity Data spreadsheet here.

NOTE: Upload the Excel (xls) file. Do not upload XML.

Uploaded File Name	Attached By	Date	Delete
No files found.			

[Facility Overview](#)

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Reporting Emissions – Subpart W (two options)

Step 1. Download a Reporting Form

To download the reporting form(s) for a subpart:

- Find the subpart in the table below
- Click the linked filename(s) in the second column
- Save the file(s) to your computer in a location of your choosing
- Repeat 1-3 for each applicable subpart

Subpart (Click to view subpart help)	Reporting Forms (click to download)	XML Schema (Click to download)	Required Submission Format
A - De Minimis Emissions	De Minimis Emissions.xls	n/a	XLS
A - Forest Product	Forest Product.xls	n/a	XLS
A - Sheet Steel - Soda Ash - Gypsum Production Data	Sheet Steel - Soda Ash - Gypsum Production Data.xls	n/a	XLS
Q - Iron and Steel Production	Subpart Q Production Data.xls	n/a	XLS
S - Lime Production (CEMS only)	Subpart S Product Information for CEMS Reporting.xls	n/a	XLS
V - Nitric Acid Production	Subpart V GHG Reporting Form - Required Data.xls	n/a	XLS
W - Petroleum and Natural Gas Systems	Petroleum and Natural Gas Systems Emissions Reporting Tool.xls	carb_subpart_w.xsd	XML
W - Petroleum and Natural Gas Systems	Petroleum and Natural Gas Systems Activity Data Workbook.xls	n/a	XLS
W - Petroleum and Natural Gas Systems	Petroleum and Natural Gas Systems Calculation Tool.xls	n/a	n/a

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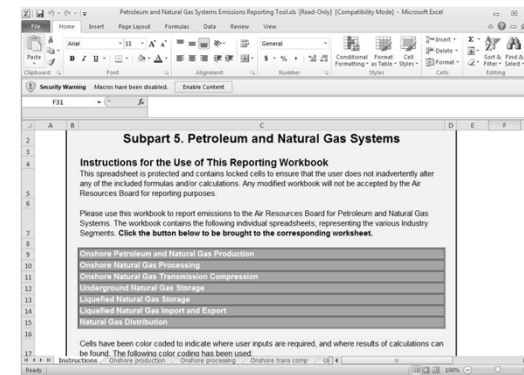
Reporting Subpart W Emissions (2 options)

- 1. Download (Excel)XLS file
 - enter data
 - Data calculated in-house, or
 - Data calculated off-line using online Calculation tool
 - save XLS file in XML format
 - upload XML file to report
- OR
- 2. Download XML schema
 - Use schema to design data export from in-house data system
 - Upload completed XML file

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Option 1 – Petroleum and Natural Gas Reporting Tool.xls



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Onshore Production

(Petroleum and Natural Gas Systems Reporting Tool.xls)

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Reporting disaggregated emissions and production data associated with both Thermal and Non-Thermal Production Operations

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Onshore NG Processing

(Petroleum and Natural Gas Systems Reporting Tool.xls)

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Offshore Petroleum and Natural Gas Production

(Petroleum and Natural Gas Systems Reporting Tool.xls)

- Download GOADS reporting software.
- Enter required data.
- Submit completed form to BOEMRE.
 - BOEMRE calculates emissions using in-house software
 - BOEMRE provides emissions report to your Offshore facility
- Report BOEMRE calculated emissions in Reporting Tool.xls

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Reporting Offshore Subpart W Emissions

- Report to BOEMRE (Bureau of Ocean Energy Management, Regulation and Enforcement)
- Report using the *Gulfwide Offshore Activity Data System - 2011 (GOADS-2011)*
<http://www.gomr.boemre.gov/homepg/regulate/enviro/airquality/goads-2011.html>
- [Emissions Reporting Software](#)
- [GOADS-2011 User's Guide](#)
- [Frequently Asked Questions About GOADS-2011 \(Word Document\)](#)
- [Technical Support](#)
- [How to Submit Emissions Reports](#)
- Report activity to BOEMRE, BOEMRE calculates facility emissions, you report emissions to EPA and ARB.

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Reporting Stationary Combustion Emissions

- Refer to Subpart C webinar slides.
- Combustion Emissions should be reported separately for thermal and non-thermal operations (in Subpart C use separate configurations for thermal and non-thermal combustion emissions).
- Report portable equipment emissions under Subpart C.
- Separately report NG processing combustion emissions from other stationary combustion emissions in Subpart C.

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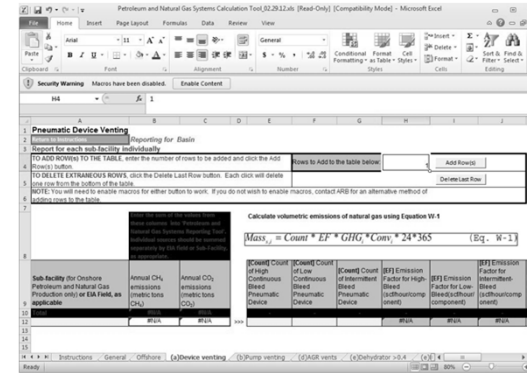
Using Cal e-GGRT calculation spreadsheets

- Download Supplemental Petroleum and Natural Gas Systems Calculation Tool.xls
 - this Calculation Tool is designed to be used off-line to calculate Subpart W GHG emissions
- Use calculation capabilities to calculate emissions.
 - Calculation Tool has a worksheet for each emissions source
 - Do not upload this Calculation Tool XLS file
- Manually enter the emission results from the tool into the Petroleum and Natural Gas Reporting Tool.xls and save the file in XML format.
- Upload the output as an XML file.

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Using Cal e-GGRT calculation spreadsheets



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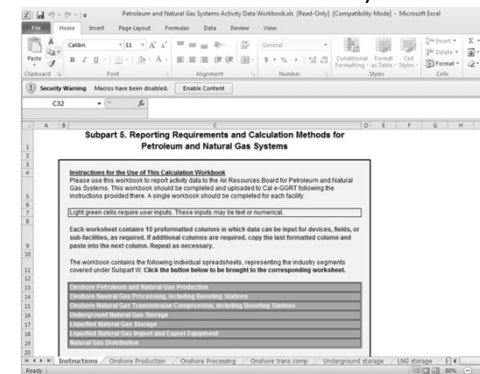
Reporting Subpart W – Activity Data

- Download XLS (Excel) file - Petroleum and Natural Gas Systems Activity Data Workbook.xls
- Enter activity data for all appropriate industry segments.
- Save file in XLS (Excel) format.
- Upload completed Activity XLS file.

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Reporting Subpart W – Activity Data (download Petroleum and Natural Gas Systems Activity Data Workbook.xls)



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Reporting Subpart W – Activity Data (onshore production)

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Reporting Subpart W – Activity Data (onshore processing)

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Data Validation

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Reporting: Validation Messages

- Tool provides data validation
- Most messages must be cleared before report submittal
- Clicking on message brings you to where the issue occurred

ARB Test Facility - TEST ONLY - Production Site (2011)
95115, 95112 (Subpart C) - Stationary Fuel Combustion
Support Overview - Validation Report

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Key Reporting Dates

- See **Key Dates** webpage for specific dates applicable to reporting year
- <http://www.arb.ca.gov/cc/reporting/ghg-rep/ghg-rep-dates.htm>
- Actual Reporting Dates may differ from dates specified in the regulation if the specified dates fall on a Saturday, Sunday, or Holiday
- **Key Dates** page is updated annually with required submission dates

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For More Information

- GHG Reporting Website
 - <http://www.arb.ca.gov/cc/reporting/ghg-rep/ghg-rep.htm>
- See website for:
 - Regulation reporting guidance and fact sheets
 - Reporting tool information
 - “Clean” copy of the regulation (no underline/strikeout)
 - Sector specialist contacts
- Email reporting tool questions to: ghgreport@arb.ca.gov

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GHG Reporting Contacts

Subject Matter	Contact
GHG Mandatory Reporting (General)	Dave Edwards, Manager 916.323.4887
Reporting Requirements, Stationary Combustion, Other Sectors (cement, glass, pulp and paper, etc.)	Patrick Gaffney 916.322.7303
Reporting Tool Registration and General Questions	Karen Lutter 916.322.8620
Electricity Generation and Cogeneration Facilities	Anny Huang 916.323.8475
Electricity Retail Providers and Electricity Marketers	Wade McCartney 916.327.0822
Fuel and CO2 Suppliers - Transportation Fuels, Natural Gas, LPG, CO2	Byard Mosher 916.323.1185
Petroleum Refineries, Hydrogen Plants, Oil & Gas Production	Byard Mosher 916.323.1185
Greenhouse Gas Report Verification	Renee Lawver, Manager 916.322.7062
Chief – Greenhouse Gas Emission Inventory Branch	Richard Bode, Chief 916.323-8413

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